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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/405,608	09/24/1999	JACK J. SMITH	0010-011	9679

7590 06/19/2003

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EXAMINER

VAUGHN JR, WILLIAM C

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 06/19/2003

11

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/405,608

Applicant(s)

SMITH ET AL.

Examiner

William C. Vaughn, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This Action is in response to the Amendment and Response received 08 April 2003.
2. Amendment A, Paper # 10, received 08 April 2003 has been entered into record.
3. Applicant's arguments with respect to claims 1-47 have been considered but are moot in view of the new ground(s) of rejection. However, the Examiner will attempt to address Applicant's main points of contention at the conclusion of the rejection.

Claim Objections

4. **Claim 1** is objected in view of 37 CFR 1.75, because the recitation, "said server", lacks antecedent bases. The Examiner will interpret "said server" to be understood to mean, "said origin server".

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 2, 8, 9, 11, 12, 16-19-21, 27, 28, 30, 31 and 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farber et al. (Farber), U.S. Patent No. 6,185,598 in view of Krishan, U.S. Patent No. 6,115,755.
7. Regarding **claim 1**, Farber discloses the invention substantially. Farber discloses *an interface device operatively coupled to an internal bus of an origin server, a method for managing connections between at least one client and said origin server* [see Farber, Col. 8, lines 47-67], *said method comprising the steps of: establishing a network connection with one of*

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said clients via a network [see Farber, Col. 7, lines 1-26]; *receiving a communication from said client via said network connection* [see Farber, Col. 7, lines 46-67 and Col. 8, lines 1-67]; *establishing a bus connection with said origin server* [see Farber, Col. 7, lines 3-67 and Col. 8, lines 1-67]; *and forwarding said client communication to said origin server via bus connection* [see Farber, Col. 7, lines 36-67 and Col. 8, lines 1-67]. However, Farber does not explicitly disclose via an internal bus of said server.

8. In the same field of endeavor, Krishan discloses (e.g., proxy server software to router traffic). Krishan discloses *via an internal bus of said server* [see Krishan, Col. 6, lines 36-55].

9. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have incorporated Krishan's teachings of proxy server software in routing traffic with the teachings of Farber, for the purpose of providing proxy software to route traffic and to allow several computers to connect to the same network card [see Krishan, Col. 3, lines 25-40], and thus Farber does provide motivation to combine by stating the reflector (reverse proxy), to either be co-located on a particular server are to be used as a plug-in [see Farber, Col. 5, lines 30-34] for example the one used within Krishan. By this rationale **claim 1** is rejected.

10. Regarding **claim 2**, Farber-Krishan further discloses *wherein said step of receiving a communication from said client includes storing said communication in a buffer* (Farber teaches that requests are mirrored (stored) at the reflector), [see Farber, Col. 9, lines 32-36]. By this rationale **claim 2** is rejected.

11. Regarding **claim 8**, Farber-Krishan further discloses *receiving a response to said client communication from said server via said bus connection* [see Farber, Col. 7, lines 37-67]; *and*

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forwarding said response to said client via said network connection [see Farber, Col. 7, lines 25-26]. By this rationale **claim 8** is rejected.

12. Regarding **claim 9**, Farber-Krishan discloses *wherein said step of receiving said response from said server includes storing said response in a buffer* [see Farber, Col. 9, lines 32-36]. By this rationale **claim 9** is rejected.

13. Regarding **claim 11**, Farber-Krishan further discloses *wherein said client communication includes an HTTP request* [see Farber, Col. 4, lines 13-64]. By this rationale **claim 11** is rejected.

14. Regarding **claim 12**, Farber-Krishan further discloses *said response from said server includes an HTML page* [see Farber, Col. 8, lines 54-67]. By this rationale **claim 12** is rejected.

15. Regarding **claim 16**, Farber-Krishan discloses *performing a security operation on said client communication prior to forwarding said client communication to said server* [see Farber, Col. 23, lines 36-47]. By this rationale **claim 16** is rejected.

16. Regarding **claim 17**, Farber-Krishan further discloses *wherein: said step of receiving said client communication includes discerning an application identifier from said client communication* [see Farber, Col. 7, lines 2-67]; *and said step of forwarding said client communication to said server includes invoking one of a plurality of proxy applications based on said application identifier* (Farber teaches that the requests that is intended for the origin server is intercepted by the reflector, which engages the reflector to be utilized as a reverse proxy server), [see Farber, Col. 35-67 and Col. 8, lines 1-67]. By this rationale **claim 17** is rejected.

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17. Regarding **claim 18**, Farber-Krishan further discloses *wherein said application identifier is the connection port number* [see Farber, Col. 7, lines 36-67]. By this rationale **claim 18** is rejected.

18. Regarding **claim 19**, Farber-Krishan further discloses *wherein said step of receiving said client communication includes receiving at least a portion of an HTTP request* [see Farber, Col. 4, lines 13-64]. By this rationale **claim 19** is rejected.

19. **Claims 20, 21, 27, 28, 30, 31, 35-38** are directed to elements implementing the method of claims 1-19. As stated above, Farber-Krishan teaches the method of claims 1, 2, 8, 9, 11, 12, 16-19. It would have been obvious to one of ordinary skill in the networking art at the time the invention was made for Krishan to teach the elements for implementing the method of claims 1, 2, 8, 9, 11, 12, 16-19 as set forth in claims 20, 21, 27, 28, 30, 31, 35-38.

Claim Rejections - 35 USC § 103

20. **Claims 3-7, 10, 13-15, 22-26 and 32-34** are rejected under 35 U.S.C. 103(a) as being unpatentable over Farber-Krishan as applied to claims 1, 2, 8, 9, 11, 12, 16-19-21, 27, 28, 30, 31 and 35-38 above, and further in view of Cohen et al. (Cohen), U.S. Patent No. 6,389,462.

21. Regarding **claim 3**, Farber-Krishan discloses the invention substantially as claimed. However, Farber-Krishan do not explicitly discloses wherein said step of storing said communication in a buffer includes accumulating one or more separate transmissions from said client in said buffer.

22. In the same field of endeavor, Cohen discloses (e.g., method and apparatus for transparently directing requests for web objects to proxy caches). Cohen discloses *wherein said*

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step of storing said communication in a buffer includes accumulating one or more separate transmissions from said client in said buffer [see Cohen, Col. 5, lines 17-32].

23. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have incorporated Cohen's teachings of a method and apparatus for transparently directing requests for web objects to proxy caches with the teachings of Farber-Krishan, for the purposes of persistence to the same origin sever to which a client browse is directed to [see Cohen, Col. 5, lines 1-7]. By this rationale **claim 3** is rejected.

24. Regarding **claim 4**, Farber-Krishan and Cohen discloses *wherein said step of establishing a bus connection with server includes waiting until a complete client request is accumulated in said buffer before establishing said bus connection with said server* [see Cohen, Col. 6, lines 22-46]. By this rationale **claim 4** is rejected.

25. Regarding **claim 5**, Farber-Krishan and Cohen discloses *receiving a response to said client communication from said server via said bus connection* [see Farber, Col. 7, lines 3-67 and Col. 8, lines 1-67]; *and forwarding said response to said client via said network connection* [see Farber, Col. 7, lines 25-26]. By this rationale **claim 5** is rejected.

26. Regarding **claim 6**, Farber-Krishan and Cohen further discloses *wherein said step of receiving said response from said server includes storing said response in a buffer* [see Farber, Col. 9, lines 32-36]. By this rationale **claim 6** is rejected.

27. Regarding **claim 7**, Farber-Krishan and Cohen further discloses *wherein said step of receiving said response from said server includes terminating said bus connection after said response is received* [see Cohen, Col. 14, lines 20-67]. By this rationale **claim 7** is rejected.

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28. Regarding **claim 10**, Farber-Krishan and Cohen further discloses *wherein said step of receiving said response from said server includes terminating said bus connection after said response is received* (Cohen teaches persistent connections), [see rejection of claim 7, supra].

By this rationale **claim 10** is rejected.

29. Regarding **claim 13**, Farber-Krishan and Cohen further discloses *wherein said step of establishing a network connection with a client includes establishing a separate network connection with each of a plurality of clients via said network* [see Cohen, Col. 5, lines 1-7]. By this rationale **claim 13** is rejected.

30. Regarding **claim 14**, Farber-Krishan and Cohen further discloses *wherein said step of establishing said bus connection with said server includes establishing a plurality of connections with said server via said internal bus of said server* [see Farber, Col. 11, lines 59-67, Col. 12, lines 1-67 and Col. 13, lines 1-52]. By this rationale **claim 14** is rejected.

31. Regarding **claim 15**, Farber-Krishan and Cohen discloses further discloses *wherein the maximum number of simultaneous client connections exceeds the maximum number of simultaneous server connections* [see Farber, Col. 9, lines 25-39]. By this rationale **claim 15** is rejected.

32. **Claims 22-26, 32-34** are directed to elements implementing the method of claims 3-7, 10 and 13-15. As stated above, Farber-Krishan and Cohen teaches the method of claims 3-7, 10 and 13-15. It would have been obvious to one of ordinary skill in the networking art at the time the invention was made for Farber-Krishan and Cohen to teach the elements for implementing the method of claims 3-7, 10 and 13-15 as set forth in claims 22-26 and 32-34.

Claim Rejections - 35 USC § 103

33. **Claims 39-47** are rejected under 35 U.S.C. 103(a) as being unpatentable over Krishan, U.S. Patent No. 6,115,755 in view of Farber et al. (Farber), U.S. Patent No. 6,185,598.

34. Regarding **claim 39**, Krishan discloses *an adapter card for operatively coupling to an internal bus of an origin server for managing origin server communication with a network, said adapter card comprising: a network controller for communicating with clients on said network (item 49); a memory device for storing data and code [see Krishan, Col. 8, lines 33-52], said code including a proxy application [see Krishan, Col. 5, lines 60-67] a processing unit (item 62) coupled to said memory device for executing said code [see Krishan, Col. 8, lines 33-54]; and a protocol adapter coupled to said processing unit, and adapted to couple to said internal bus, for communicating with said server [see Krishan, Col. 5, lines 40-67 and Col. 6, lines 1-67].*

However, Krishan does not explicitly disclose that the proxy application is a reverse proxy application.

35. In the same field of endeavor, Farber discloses (e.g., optimized network resource location). Farber discloses a proxy application is a reverse proxy application [see Farber, Col. 8, lines 50-67].

36. Accordingly, it would have been obvious to one of ordinary skill in the networking art at time the invention was made to have incorporated Farber's teachings of a optimized network resource location with the teachings of Krishan, for the purpose of providing a better way for servers in a computer network to off-load their processing requests for selected resources by determining a different server to process those request as well as to server a request locally by utilizing reflector as a reverse proxy. By doing so, this would further improve network

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performance through the use of a reverse proxy cache [see Farber, Col. 2, lines 26-60 and Col. 8, lines 54-67]. Farber provides motivation to combine with Krishan, by stating that the reflector may be co-located or may even be used as a plug-in as taught by Krishan [see Farber, Col. 5, lines 30-34]. By this rationale **claim 39** is rejected.

37. **Claims 40-47** are directed to elements implementing the adapter card of **claim 39**. As stated above, Krishan teaches the adapter card of claim 39. It would have been obvious to one of ordinary skill in the networking art at the time the invention was made for Krishan to teach the elements of implementing the adapter card of claim 39 as set forth in claims 40-47.

Double Patenting (Obviousness)

38. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over **claims 1 and 15** of U.S. Patent No. 6,308,238. Although the conflicting claims are not identical, they are not patentably distinct from each other because.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows:

U.S. Patent No. 6,308,238	<i>Instant Application: 09/405,608</i>
1. In an interface device operatively coupled to an internal bus of an origin server, a method for managing connections between at least one client and said origin server, via said interface device, said method comprising:	<i>1. In an interface device operatively coupled to an internal bus of an origin server, a method for managing connections between at least one client and said origin server, said method comprising the steps of:</i>
establishing a network connection with one of said clients via a network;	<i>establishing a network connection with one of said clients via a network;</i>
Receiving a communication from said client via said network connection;	<i>receiving a communication from said client via said network connection;</i>
establishing a bus connection with said origin server via an internal bus of said	<i>establishing a bus connection with said server via an internal bus of said server;</i>

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server; and	<i>and</i>
forwarding said data request to said origin server via said bus connection.	<i>Forwarding said client communication to said server via said bus connection.</i>

Claim 1 of the application is generic to the species of invention covered by **claims 1 and 15** of the patent. In that, the generic invention is "anticipated" by the species of the patented invention. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993). Thus, since anticipation is the epitome of obviousness, the claim of instant application 09/738,054 is obvious over the claim of U.S. Patent No. 6,308,238.

39. **Claim 39** is rejected under the judicially created doctrine of double patenting over **claims 43 and 49** of U. S. Patent No. 6,308,238 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows:

U.S. Patent No. 6,308,238	<i>Instant Application: 09/405,608</i>
43. An adapter card for operatively coupling to an internal bus of an origin server for managing origin server communication with a network, said adapter card comprising:	<i>39. An adapter card for operatively coupling to an internal bus of an origin server for managing origin communication with a network, said adapter card comprising:</i>

A network controller for communicating with clients on said network;	<i>A network controller for communicating with clients on said network;</i>
A memory device for storing data and code, and said code including a reverse proxy application;	<i>A memory device for storing data and code, said code including a reverse proxy application;</i>
A processing unit coupled to said memory device for executing aid code; and	<i>A processing unit coupled to said memory device for executing said code; and</i>
A protocol adapter coupled to said processing unit, and adapted to couple to said internal bus, for communicating with said origin server.	<i>A protocol adapter coupled to said processing unit, and adapted to couple to said internal bus of said origin server, for communicating with said origin server.</i>

Claim 39 of the application is generic to the species of invention covered claims 43 and 49 of the patent. In that, the generic invention is “anticipated” by the species of the patented invention. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993). Thus, since anticipation is the epitome of obviousness, the claim of instant application 09/738,054 is obvious over the claim of U.S. Patent No. 6,308,238.

Response to Arguments

40. Applicant’s arguments filed on 08 April 2003 have been carefully considered but they are not deemed fully persuasive. However, because there exists the likelihood of future presentation of this argument, the Examiner thinks that it is prudent to address applicants’ main points of contention. Applicant’s arguments include:

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- a. Reconsideration and withdrawal of the 35 USC 112, 2nd paragraph rejection.
- b. Applicant traverses the 35 USC 102(a) rejection by U.S. Patent No. 5,935,249.
- c. Applicant argues that Krishan fails to teach a reverse proxy application.

41. As to "Point A", Applicant's request for reconsideration and withdrawal of the 35 USC 112, 2nd paragraph rejection has been considered and thus based upon the amended claim the rejection is withdrawn.

42. As to "Point B", Applicant's traversal with respect to the 35 USC 102(a) rejection of claims 1-47 by U.S. Patent No. 5,935,249 has been considered but is moot in view of new ground(s) of rejection.

43. As to "Point C", Applicant's arguments with respect to Krishan failing to teach a reverse proxy application. With regards to this argument, it is evident from the detailed mappings found in the above rejection(s) that Krishan and Farber disclose the functionality of a reverse proxy application. Further, it is clear from the numerous teachings within Krishan-Farber that the provision for a reverse proxy application, was widely implemented in the networking art. Thus, Applicant's arguments drawn toward distinction of the claimed invention and the prior art teachings on this point are not considered persuasive.

Citation of Pertinent Prior Art

44. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Marco Pistoia, "Web Caching and Filtering with IBM Websphere Performance Pack", discloses that a reverse proxy is a method of making the proxy server transparent to the

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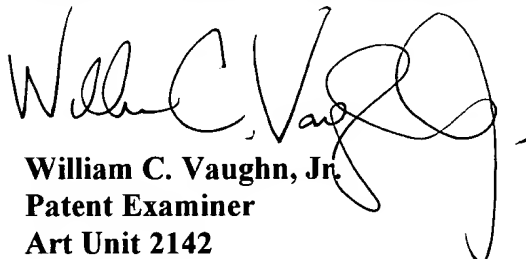
client. When the Proxy server is configured for reverse proxy, it appears to the client to be the origin server [see page 18].

Conclusion

45. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Vaughn, Jr. whose telephone number is (703) 306-9129. The examiner can normally be reached on 8:00-5:00, 1st Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Powell can be reached on (703) 305-9703. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9700.



William C. Vaughn, Jr.
Patent Examiner
Art Unit 2142
June 16, 2003